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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/425,668	10/22/1999	HIROYUKI NAKAMURA	MTS-V03174	9874

7590 12/16/2002

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EXAMINER

SMITH, SHEILA B

ART UNIT	PAPER NUMBER
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2685

DATE MAILED: 12/16/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/425,668

Applicant(s)

NAKAMURA ET AL.

Examiner

Sheila B. Smith

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 11 the newly amended limitation recites "sufficient value" by using the term "sufficient", this makes the claim indefinite, also in claim 1 in line 13 the newly amended limitation recites "substantially decreasing" by using the term "substantially", this too makes the claim indefinite.

Claim 8 line 3, recites the limitation "significantly high value." by using the term "significantly", makes the claim indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3, 4, 6, 7, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimo (U.S. Patent Number 5,193,218) in view of Kang (U. S. Patent Number 6,034,990).

Regarding claims 1, 4, 7 and 8, Shimo discloses essentially all the claimed invention as set forth in the instant application, further Shimo discloses signal transmission reception switching apparatus. In addition Shimo discloses an antenna terminal connected to an antenna (4), a transmission terminal connected to a transmission circuit (1), a reception terminal connected to a reception circuit (2), a first switching element (11) that turns on or off the connection between antenna terminal and transmission terminal, a second switching element (13) that turns on or off the connection between the antenna terminal and reception terminal, and a filter (3) as exhibited in figure 3 and as disclosed in column 1 lines 50-62. However, Shimo fails to specifically disclose a filter means inserted between first switching element and antenna terminal and filtering means attenuated harmonic contents and phase characteristics increase the impedance.

In the same field of endeavor Kang discloses a digital radio transmission and reception system applying a direct modulation and demodulation method. In addition Kang discloses a filter means (52) inserted between first switching element (45) and antenna terminal (10) exhibited in figure 4, and filtering means (52) attenuated harmonic contents and phase characteristics increase the impedance as exhibited in figure 1 and disclosed in column 4 lines 19-22 and lines 52-56.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shimo with a filter means inserted between first switching element and antenna terminal and filtering means attenuated harmonic contents and phase characteristics increase the impedance as taught by Kang for the purpose of conducting transmission and reception simultaneously.

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Regarding claims 3 and 6, Shimo discloses everything claimed, as applied above (see claim 1) additionally, Shimo discloses a first switching element comprises a diode (11) and a second switching element comprises a diode (13) and a quarter-wave line (24) as disclosed in column 6 lines 5-17.

4. Claims 2, 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimo (U.S. Patent Number 5,193,218) in view of Kitakubo (U. S. Patent Number 5,822,684).

Regarding claims 2 and 5, Shimo discloses everything claimed, as applied above (see claim 1) however Shimo fails to disclose a filtering means attenuated harmonic contents and phase characteristics increase the impedance.

In the same field of endeavor, Kitakubo further discloses a antenna switching circuit and wireless communication system. In addition Kitakubo discloses a filtering means (6) attenuated harmonic contents and phase (5) characteristics increase the impedance as exhibited in figure 1 and disclosed in column 1 lines 29-34.

Therefore, it would have been obvious to one of ordinary skill at the time the invention was made to modify Shimo by specifically providing for the use of a filtering means attenuated harmonic contents and phase characteristics increase the impedance as taught by Kitakubo for the purpose of conducting transmission and reception simultaneously.

Response to Arguments

5. Applicant's arguments filed on 8/28/02 have been fully considered but they are not persuasive.

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Regarding claim 1, the examiner contends in view of the 112 rejection that it is obvious to one of ordinary skill in the art that any element (filter) placed between two points will increase the impedance of the flow of the signal to the points, thereby decreasing the leakage of the flow of the signal from one point to the other. The examiner restates and stands by the above rejection and thus making this action final.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheila B. Smith whose telephone number is (703)305-0104. The examiner can normally be reached on Monday-Thursday 8:00 am - 5:00 pm.

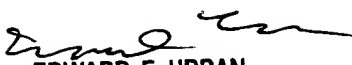
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 703-308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-6306 for regular communications and (703)308-6296 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

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S. Smith
December 4, 2002


EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
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